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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,651	12/02/2003	Wenguang Ma	ALCN-101US1	4520
23122	7590	08/11/2005	EXAMINER	
RATNERPRESTIA P O BOX 980 VALLEY FORGE, PA 19482-0980			DANIELS, MATTHEW J	
			ART UNIT	PAPER NUMBER
			1732	
DATE MAILED: 08/11/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/725,651

Applicant(s)

MA ET AL.

Examiner

Matthew J. Daniels

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/8/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. **Claims 1-3, 8, 11, 12, 15, 16** are rejected under 35 U.S.C. 102(b) as being anticipated by Aishima (USPN 3857914). **As to Claim 1**, Aishima teaches a method for making a composite comprising:

- (a) extruding a foamable gel comprising a blowing agent (2:35-48) and a foamable polyester (2:27-28) through a multi-orifice die to give a plurality of strands (Figs. 2b and 2c);
- (b) foaming the strands to form a multi-stranded foamed article (3:63-68 and Figs. 2b and 2c);
- (c) shaping the multi-stranded foamed article to give a core material (3:63-68 and 5:18-21); and
- (d) bonding the core material to one or more structural skins (3:49-52). Additionally, Aishima teaches:

**Claim 2:** Aishima teaches coalescing after foaming (3:63-65 and Figs. 2b and 2c, because the holes, 8a, are not located directly next to one another, foaming would have necessarily and inherently preceded coalescing because the passageway is not constricted beyond the die, see Fig. 1, Items 6 and 9).

**Claim 3:** Aishima teaches expanding the blowing agent (2:35-48)

**Claim 8:** a thermoplastic polymer (3:48-52 and 2:14-34 and Fig. 1, Item 6)

Art Unit: 1732

**Claim 11:** a resin applied to the structural skins (2:27 and 3:49-52)

**Claim 12:** bonding with heat (heating was inherent to cause melting and subsequent melt adherence described in 3:26-52)

**Claims 15 and 16:** foamable polyethylene terephthalate (2:15 and 2:27)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 4, 5, 6, and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Aishima (USPN 3857914) in view of Soda (USPN 3720572). Aishima teaches the subject matter of Claims 1 and 2, see the rejections above under 35 USC 102(b). Aishima appears to be silent to the subject matter of Claims 4, 5, 6, and 14. However, the would have been prima facie obvious over Soda who teaches:

**Claim 4:** inter-strand voids (this aspect would have been obvious in that coalescing with pressure was required to form a unitary article, 10:35-56)

**Claim 5:** shaping to remove the inter-strand voids (inherent in the coalescing, 10:20-34, and Figs. 15-18)

**Claim 6:** an interior section and a jacket, the average cell size in the interior section being larger than in the jacket (inherent in that the inner part of each strand is “lower density”, 1:50-65, see also 9:30-36)

Art Unit: 1732

**Claim 14:** flame/fire retardants and reinforcement (13:10-17)

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Soda into that of Aishima in order to a) form a unitary article (10:52-56) and b) provide an article that simulates synthetic wood (13:15-65).

3. **Claims 7, 9, 10, and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Aishima (USPN 3857914) in view of Wiley (USPN 3861977). Aishima teaches the subject matter of Claims 1 and 8, see the rejections above under 35 USC 102(b). **As to Claims 7, 9, 10, 13**, Aishima appears to be silent to the claimed limitations. However, they would have been prima facie obvious over Wiley who teaches:

**Claim 7:** bonding the core between two structural skins (2:16-20)

**Claim 9:** glass fibers (3:40-45)

**Claim 10:** a structural sandwich composite (2:63-3:6 and Fig. 4, Items 26, 28, and 30, and 2:15-20)

**Claim 13:** vacuum bagging (Abstract, line 4)

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Wiley into that of Aishima in order to a) obtain a primary bond without sanding (2:15-20), b) bond without covering the entire article with the vacuum bag (2:21-25), c) eliminate the tedious and expensive bag clean-up process (4:24-33), and provide a part having sufficient strength for a modular building unit (2:65-68).

***Conclusion***

Art Unit: 1732

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Daniels whose telephone number is (571) 272-2450. The examiner can normally be reached on Monday - Thursday, 7:30 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJD 7/28/05

*MJD*



**MICHAEL P. COLAIANNI**  
**SUPERVISORY PATENT EXAMINER**